



SEQUENCE LISTING

<110> IUCHI, SATOSHI
KOBAYASHI, MASATOMO
SHINOZAKI, KAZUO

<120> TRANSGENIC PLANTS CARRYING NEOXANTHIN
CLEAVAGE ENZYME GENE

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<170> PatentIn Ver. 2.1

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Pro	Ala	Val	Gln	Leu	Ser	Gly	Asn	Phe	Ala	Pro	Val	Asn	Glu	Cys	Pro	
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Arg	Leu	Val	Gln	Glu	Thr	Ala	Leu	Gly	Arg	Ser	Val	Phe	Pro	Lys	Pro	
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Val Ile Ala His Pro Lys Val Asp Ala Thr Thr Gly Asp Leu His Thr	
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Leu Ser Tyr Asn Val Leu Lys Lys Pro His Leu Arg Tyr Leu Lys Phe	
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Asn Thr Cys Gly Lys Lys Thr Arg Asp Val Glu Ile Thr Leu Pro Glu	
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Pro Thr Met Ile His Asp Phe Ala Ile Thr Glu Asn Phe Val Val Ile	
325 330 335	
ccg gat cag caa atg gta ttc aaa tta tcc gaa atg att cgg ggc ggg	1056
Pro Asp Gln Gln Met Val Phe Lys Leu Ser Glu Met Ile Arg Gly Gly	
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Ser Pro Val Ile Tyr Val Lys Glu Lys Met Ala Arg Phe Gly Val Leu	
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Pro Val Pro Ser Pro Val Lys Leu Lys Pro Thr Tyr Pro Asn Leu Asn
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Leu Leu Gln Lys Leu Ala Ala Thr Met Leu Asp Lys Ile Glu Ser Ser
 65 70 75 80

Ile Val Ile Pro Met Glu Gln Asn Arg Pro Leu Pro Lys Pro Thr Asp
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Pro Ala Val Gln Leu Ser Gly Asn Phe Ala Pro Val Asn Glu Cys Pro
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Gly	Phe	Asp	Asn	Gln	Val	Ser	Tyr	Ser	Cys	Arg	Tyr	Thr	Lys	Thr	Asn
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Leu	Glu	Thr	Ile	Gly	Arg	Phe	Gly	Phe	Asp	Asp	Gln	Ile	Asp	Ser	Ser
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Val	Ile	Ala	His	Pro	Lys	Val	Asp	Ala	Thr	Thr	Gly	Asp	Leu	His	Thr
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Leu	Ser	Tyr	Asn	Val	Leu	Lys	Lys	Pro	His	Leu	Arg	Tyr	Leu	Lys	Phe
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Asn	Thr	Cys	Gly	Lys	Lys	Thr	Arg	Asp	Val	Glu	Ile	Thr	Leu	Pro	Glu
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Pro	Asp	Gln	Gln	Met	Val	Phe	Lys	Leu	Ser	Glu	Met	Ile	Arg	Gly	Gly
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Ser	Lys	Gln	Asp	Leu	Thr	Gly	Ser	Asp	Ile	Asn	Trp	Val	Asp	Val	Pro
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Asp	Cys	Phe	Cys	Phe	His	Leu	Trp	Asn	Ala	Trp	Glu	Glu	Arg	Thr	Glu
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Pro	Pro	Phe	Lys	Asp	Leu	Pro	Ser	Thr	Ser	Ser	Pro	Thr	Asn	Leu	Leu	
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Pro	Leu	Arg	Lys	Thr	Ser	Ser	Ser	Asn	Thr	Ile	Thr	Cys	Ser	Leu	Gln	
35								40				45				
aca	ctc	cac	ttc	ccc	aaa	cag	tac	caa	cca	aca	tcc	aca	tcc	aca	tcc	192
Thr	Leu	His	Phe	Pro	Lys	Gln	Tyr	Gln	Pro	Thr	Ser	Thr	Ser	Thr	Ser	
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Pro Ala Asp Ser Ile Phe Asn Glu Cys Glu Glu Ser Leu Lys Ser Val	
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Pro	Leu	Pro	Gln	Lys	Trp	Asn	Phe	Leu	Gln	Lys	Ala	Ala	Ala	Thr	Ala
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Leu	Lys	Tyr	Phe	Tyr 325	Phe	Arg	Pro	Asp	Gly 330	Thr	Lys	Ser	Asp	Asp 335	Val
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Ser 385	Arg	Phe	Gly	Val	Leu 390	Pro	Lys	His	Ala	Ala 395	Asp	Ala	Ser	Glu	Met 400
Ala	Trp	Val	Asp	Val 405	Pro	Asp	Cys	Phe	Cys 410	Phe	His	Leu	Trp	Asn 415	Ala
Trp	Glu	Asp	Glu 420	Ala	Thr	Gly	Glu	Val	Val	Val	Ile	Gly 430	Ser	Cys	Met

Thr Pro Ala Asp Ser Ile Phe Asn Glu Ser Asp Glu Arg Leu Glu Ser
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 Val Leu Thr Glu Ile Arg Leu Asp Ala Arg Thr Gly Arg Ser Thr Arg
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 Gly Glu Asp Asp Gly Tyr Val Leu Thr Phe Val His Asp Glu Arg Ala
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 Ser Leu Leu Lys Asn Gln His Asn Arg Gln Ser Leu Asn Ile Asn Ser
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Glu	Leu	Glu	His	Pro	Leu	Pro	Lys	Thr	Ala	Asp	Pro	Arg	Val	Gln	Ile	
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Ser	Gly	Asn	Phe	Ala	Pro	Val	Pro	Glu	Asn	Pro	Val	Cys	Gln	Ser	Leu	
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Pro	Val	Thr	Gly	Lys	Ile	Pro	Lys	Cys	Val	Gln	Gly	Val	Tyr	Val	Arg	
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gac	ggc	gac	ggt	atg	gtt	cac	gcc	gtt	caa	ttc	aaa	aat	ggg	tcg	gct	576
Asp	Gly	Asp	Gly	Met	Val	His	Ala	Val	Gln	Phe	Lys	Asn	Gly	Ser	Ala	
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Phe Asp Phe Asp Gly Gln Leu Lys Ser Thr Met Ile Ala His Pro Lys	
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Leu Asp Pro Val Ser Gly Glu Leu Phe Ala Leu Ser Tyr Asp Val Ile	
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Phe Ala Ile Thr Glu Asn Phe Val Val Ile Pro Asp Gln Gln Val Val	
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Arg Pro Ser Lys Gly Phe Ser Ser Lys Leu Leu Asp Leu Leu Glu Arg
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Leu Val Val Lys Leu Met His Asp Ala Ser Leu Pro Leu His Tyr Leu
35 40 45

69499-69549

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Tyr Val Ile Lys Val Leu Glu Asp Gly Asp Leu Gln Thr Leu Gly Ile
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Ser	Glu	Ala	Ile	Tyr	Val	Pro	Arg	Glu	Thr	Ala	Glu	Glu	Asp	Asp	Gly
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Thr	Val	Ile	Asp	Ala	Lys	Thr	Met	Ser	Ala	Glu	Pro	Val	Ala	Val	Val
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Leu	Val	Val	Lys	Leu	Met	His	Asp	Ala	Ser	Leu	Pro	Leu	His	Tyr	Leu	35	40	45	
Ser	Gly	Asn	Phe	Ala	Pro	Ile	Arg	Asp	Glu	Thr	Pro	Pro	Val	Lys	Asp	50	55	60	
Leu	Pro	Val	His	Gly	Phe	Leu	Pro	Glu	Cys	Leu	Asn	Gly	Glu	Phe	Val	65	70	75	80
Arg	Val	Gly	Pro	Asn	Pro	Lys	Phe	Asp	Ala	Val	Ala	Gly	Tyr	His	Trp	85	90	95	
Phe	Asp	Gly	Asp	Gly	Met	Ile	His	Gly	Val	Arg	Ile	Lys	Asp	Gly	Lys	100	105	110	
Ala	Thr	Tyr	Val	Ser	Arg	Tyr	Val	Lys	Thr	Ser	Arg	Leu	Lys	Gln	Glu	115	120	125	
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Lys	Ile	Leu	Asp	Asn	Thr	Tyr	Gly	Asn	Gly	Thr	Ala	Asn	Thr	Ala	Leu	165	170	175	
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Arg	Pro	Lys	Glu	Met	Val	Lys	Glu	Lys	Lys	Met	Ile	Tyr	Ser	Phe	Asp
290						295				300					
Pro	Thr	Lys	Lys	Ala	Arg	Phe	Gly	Val	Leu	Pro	Arg	Tyr	Ala	Lys	Asp
305				310						315				320	
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Phe	Pro	Arg	Ile	Asn	Glu	Cys	Tyr	Thr	Gly	Lys	Lys	Gln	Arg	Tyr	Val
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